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§ 214. **Opuntia Ficus-Indica**, DC.—It may not be out of place to note a few things about the *Opuntia Ficus-Indica*, of Southern Italy and other Mediterranean countries. Its main use in the Orient appears to be first to serve as a hedge, and next to furnish food. In Cyprus I have seen it in thickets of considerable extent. When used to make a hedge, joints of the stem, which people generally call the leaves, are stuck in the earth in the fence line; often on the top of a stone wall; and sometimes merely laid on the ground. It is sure to grow; hardly anything seems to destroy its vitality. In late winter, or early spring, the stem sends out its buds, or stem-joints, which soon assume the familiar spatulate form, and are, from the start, covered with the appressed bracts or leaves. These bracts disappear soon after the new stem-joint has acquired firmness and shape, and never appear again, except when the joint so formed sends out new ones. They are replaced by spines, often, if not generally, an inch and a half long; two or three to five or six in a whorl or nodule; which make the hedge impassable to anything from cavalry to chickens. Yet not only camels but the Syrian goats feed on the green stem-joints, disregarding the spines; and I have now and then seen a donkey eating them, too. The new stem-sections or joints appear normally along the larger end of the spatula, but by no means universally so. Frequently one or more will start from the middle of the flat side; and these new ones will in time put forth others, in all positions and directions; so that the *Opuntia* growth is always a curious and novel sight.

The stem-sections vary greatly in size, but generally reach a foot or more in length, and eight to ten inches in breadth, with a thickness of an inch to an inch and a half. I have rarely seen a section two feet long, and two inches thick. I refer now to the sections when young and green.

The structure of the young stem-section appears much better in this great *Opuntia* than in the *O. Rafinesquii* of this country. First is the cutis, which I have often peeled off by using a little care, and which is white in itself. Underneath is a firm layer, filled with chlorophyll, about an eighth of an inch deep, and then the vascular body, of a much lighter green. The whole is extremely succulent, so much so that one smashing the joints with a stone often gets spattered with the juice. When a section is dead, and the inside decayed out, the cutis often remains like a bag of fine, stiff parchment, and rather tougher than paper.

Regularly, when a section has put forth new ones, and these new ones again, it stiffens up to bear the added weight and leverage. This it does by increasing in size in all directions, but chiefly in thickness, and at the same time becoming woody. The woody fibres are a loosely, and somewhat tangled reticulated mass; which become more numerous, somewhat finer, and firmer, with age and size. The lower joints gradually become quite round and cylindrical, the weaker branches give way to weight or accident—the wind and other causes breaking off the little joints—and the whole plant be-

comes a tree, with a stem from eight inches to a foot and a half in diameter, having lost its light green color, and assumed a common brown, suitable for tree trunks. The roots become large, and spread widely. The trunk, however, always shows the sutures of the original sections; though one could hardly believe, at first sight, that they were all once green, juicy, flat and spatulate, like the new sections. The tree thus formed is from about seven to nine feet high; but I have seen one or two as much as fifteen. A few of them will stand together; and when over-run by the pendent smilax of the country, the long-suckered rubus, and sheltering beneath it the crocuses of different hues, with the "wee, modest, crimson-tipped" daisy, and the singular arums, present a very pretty sight. But the whole tangle is a fearful place to get against—to get into it is next to impossible.

The flowers come out on the edges and flat surfaces (principally upon the edges) of the stem-sections, in spring; the ovary being nearly as large when the flower appears, as afterwards, when it becomes ripe fruit. The flower above the ovary is very nearly of the same size and appearance as that of *O. Rafinesquii*, but with the yellow, shades of orange and even pink now and then appear. The ovary and fruit are much larger; but as one can see the fruit for sale in New York (rather small specimens), I will not describe it, except to say that it is furnished with the troublesome bristles, in whorls or nodules, like the stems of *O. Rafinesquii*; and that for eating, it is a little cooling, but too full of seeds for comfort; very commonly eaten, by the poorer classes especially, and very cheap. The fruit is generally gathered by women and children, who use for the purpose a long pole with a sharpened nail, with which last they pierce the fruit and thus pull it off. It is shaken or rubbed around in a bag or basket to get off the bristles.

Before the flowers are open, they have inside a plentiful sweetish moisture, and are visited not only by ants, but by a peculiar insect which I cannot well describe, being no entomologist; but this insect I never failed to find in the imbricated, twisted perianth, *before it began to open*; after the least opening at the top, the bug was gone. Such I found to be the case with every flower I tried, without one exception. I tried, probably, some thousands; for I made it a business to do them by hundreds, morning after morning.

The number of flowers on an ordinary joint was about twenty; rather more than less. Now and then there would be many together with from ten to eighteen; but not infrequently I have seen over forty on a joint; the largest number I remember was fifty-two. One can thus imagine the quantity of fruit in a hedge seven feet high, with the stem-joints so close together that a hen could not get through.

I. H. HALL.

610, CHESTNUT STREET, PHILADELPHIA.

§ 215. DEAR MR. EDITOR:—Considering that your worthy CLUB bears the name of that venerable man and scrupulously conscientious botanist who disliked most of all hasty and inconsiderate publication of genera and species, may an old botanist advise some younger ones